

BAE -- 10/626,550
Attorney Docket: 040021-0305239

REMARKS

Claims 1 and 5-8 are pending. By this Amendment, claim 1 is amended. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Claims 1 and 5-8 were rejected under 35 USC § 103(a) over Aoki (U.S. Patent 6,387,821) in view of Han et al. (U.S. Patent 6,281,135). The rejection is respectfully traversed.

Claim 1 recites a method of forming metal wiring in a semiconductor device comprising, *inter alia*, forming an unfinished via hole by removing the low temperature oxide selectively for a prescribed thickness using the first photoresist pattern as a mask, wherein a thickness of the low temperature oxide remaining inside the via hole does not exceed a predetermined thickness of an upper part of a damascene contact.

In order to change the thickness of an upper part of the damascene pattern to obtain a desired sheet resistance of the damascene pattern, the thickness of the low temperature oxide remaining inside the via hole must be changed. If the thickness of the low temperature oxide remaining inside the via hole is thicker than the thickness of the upper part of the damascene pattern, additional etching process for opening the via hole must be undertaken. Thus, the additional etching causes an increase of a depth of the upper part of the damascene pattern, then the sheet resistance of the upper part of the damascene pattern would have undesirable changes.

Although Aoki and Han et al. both disclose a low temperature oxide remaining inside the via hole, neither Aoki nor Han et al. disclose or suggest limiting a thickness of the low temperature oxide remaining inside the via hole because neither Aoki nor Han et al. require a low temperature oxide having a thickness that does not exceed a predetermined thickness of an upper part of a damascene contact. See, for example, column 8, lines 32 to 34 of Aoki and column 6, lines 26 to 29, of Han et al.

As neither Aoki nor Han et al. disclose or suggest a thickness of the low temperature oxide remaining inside the via hole that does not exceed a predetermined thickness of an upper part of a damascene contact, the combination fails to disclose or suggest all the claim limitations and fails to present a *prima facie* case of obviousness.

BAE -- 10/626,550
Attorney Docket: 040021-0305239

Claims 2 and 5-8 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 1 and for the additional features recited therein.

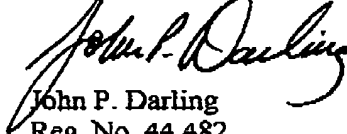
Reconsideration and withdrawal of the rejection of claims 1 and 5-8 are respectfully requested.

In view of the above amendments and remarks, it is respectfully submitted that all of the claims are allowable and that the entire application is in condition for allowance.

Should further issues require resolution prior to allowance, the Examiner is requested to telephone the undersigned at the number below.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP



John P. Darling

Reg. No. 44,482

Tel. No. (703) 905-2045

Fax No. (703) 905-2500

Date: July 28, 2005
P.O. Box 10500
McLean, VA 22102
(703) 905-2000